

**Camden County Travel Management Coordination Center
Demonstration Project NJ-26-7065**

White Paper

April 16, 2008



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Introduction

The Camden County Workforce Investment Board (WIB) is one of eight sites selected by the U.S. Department of Transportation (USDOT) in late 2006 to demonstrate enhanced human service transportation models through the development of a Travel Management Coordination Center (TMCC). This project is Phase I of a joint demonstration of the USDOT United We Ride and Mobility Services for All Americans initiatives; Phase II will provide either implementation monies for two of the eight sites or implementation *starter* money for each of the eight sites.

The goal of the Camden County TMCC is to provide **expanded** and **more efficient** mobility services for Camden County residents through the integration of provider services and user needs that in many cases have been functioning as independent entities. Technology improvements are critical to promoting this federated approach to transportation. This paper focuses on the relationships between **advocate/funding agencies, provider operators** and **riders** and how the TMCC and its proposed technology can achieve the goals of service expansion and improved efficiency.

Through ongoing outreach to Camden County riders, providers and funders, a proposed TMCC model is growing. Camden County stakeholders envision a federated approach that will form a TMCC of independent providers and funding agencies that will enhance and build upon the service network currently operating and serving riders in the County. It has taken strong partnership building to get to this stage. The advisory role of the Technical Task Force composed of representatives of key providers, the Board of Social Services, and regional transportation planning agencies coupled with the WIB leadership and outreach to Camden County residents has proved invaluable in developing a comprehensive implementation plan that will ensure continued partnerships and provide expanded mobility services for Camden County residents.

Through the course of this initiative six core strategies for meeting the goals cited above have been agreed upon.

1. Develop a Faith Based Collaborative that will serve as a community transportation network
2. Provide customer trip information
3. Establish a seamless fare and billing system
4. Coordinate provider trip functions
5. Create a one stop call center
6. Improve rider security

This paper discusses each of these core strategies in a coordinated, phased approach that uses improved technology to help advocate/funding agencies, provider operators and riders work in concert to **EXPAND** (address unmet mobility needs) and to become **MORE EFFICIENT** (provide more trips with current available funding).

1. Faith Based Collaborative

The use of the technology described in this paper brings significant flexibility to an otherwise rigid system. Thus, the TMCC initiative is viewed as a major opportunity for faith-based organizations (FBOs) to enhance the existing countywide human service transportation provider network. The plasticity technology provides for the Camden County TMCC opens a window for Camden County houses of worship to form a Faith Based Collaborative that will provide additional transportation services to Camden County communities. The Faith Based Collaborative will become the governance framework for FBO transportation providers while the TMCC will provide coordination of services for the unique faith based 501 c3.

2. Customer Trip Information

One of the needs identified through rider focus groups and surveys is easy access to accurate trip information. The TMCC system needs to:

- Provide access to arrival, departure and delay information for individual vehicle trips
- Provide transportation information at key stop/locations about routes, schedules and operators
- Provide automated alerts and reminders to riders

It is envisioned that the TMCC system will:

- Provide the rider with next vehicle arrivals at key pickup/drop-off locations
- Provide information about routes, schedules and provider contact information at key pickup/drop-off locations
- Provide automated alerts and reminders to customers on trip delays and changes

These solutions range from low tech strategies, such as posted schedule information at key stops, to more advanced technologies, such as automated screens providing information on the next arriving vehicle or touch screen access to transit system information. Some of these technologies, such as the arriving vehicle information, build on the GPS technologies that are used for locating vehicles and reporting vehicle rider data.

3. Seamless Fare and Billing System

In order to achieve shared assignment of passengers to various operators, there is a need to assign the cost of a passenger trip based on some unit of cost. The system needs to:

- Assign the cost of the customer trip based on the operator unit cost back to an appropriate funding source
- Enable the operator to be paid for their cost of providing the customer trip
- Enable the customer to be billed (if appropriate) for their share of the cost of the trip

Currently, Camden County Operators such as Sen-Han Transit have a billing component with their scheduling software that generates reports showing the number of trips billed back to a series of funding agencies. The need is to expand this capability so that multiple funding agencies and additional providers can be billed and paid, respectively, for their portion of customer trips.

This emphasizes the need for an upgraded Scheduling Software that contains a billing component. It also allows the TMCC to maintain and manage the various unit costs of providers and the billing rates agreed upon for funding agencies.

Ultimately, the inclusion of an electronic user card that interfaces with the scheduling and billing software ensures the accuracy of the system. The “smart card” is a tool that contains information on the rider and works as an identification card and/or as a transit pass. In either case it allows:

- the rider to make trips on multiple providers and have the cost billed back to the appropriate funding agency
- the rider to pay for his/her share (if any) by charging a personal account such as a credit or debit card
- the funding agency to pay the appropriate provider

4. Coordination of Provider Trip Functions

One goal of this project is to improve the efficiency of current provision of service by assisting operators in filling empty seats. This includes providing assistance to participants of the Faith Based Collaborative by including their vehicles in a database of providers that tracks available times, geography and trip types.

A case study of current Medicaid dialysis trips being performed in Camden County clearly shows that by moving a passenger to a vehicle traveling in the same direction at the same time, the cost per passenger trip is reduced by approximately 20 percent.

As noted in the One Call section, there is a need ultimately to be able to register the customer with all potential providers and to enable the TMCC access to the daily vehicle runs of participating operators so that new trips can be assigned to the most appropriate provider. Coordination of provider trip functions will include:

- Software package that enables coordination and automation of TMCC and provider functions
- Access to the geographic location of provider vehicles for the TMCC federated providers
- Recording and transmission of information between the vehicle and the TMCC and provider dispatch personnel

While initially this trip integration can be done by manual reassignments of passengers to the appropriate provider, ultimately there is a need for currently existing technology to be used by the Camden County providers. These technologies include:

Automated Vehicle Locator (AVL): This GPS system enables an operator to locate a vehicle on a computer screen map in an office in real time. It becomes the basis for enabling mobile data computers, as well as providing ride update aids at key bus stops and at the riders' homes (See Improved Customer Security and Communications).

AVL enables an operator dispatcher to add on last minute trips to the most appropriate vehicle run by knowing where that vehicle is every minute. This helps in dealing with vehicle breakdowns, customer delays at a medical appointment and last minute customer additions.

Mobile Data Computer (MDC): On-board computers send passenger trip data back to the office, eliminating the need for time consuming reconciliation of hand written driver manifests. It also provides more detailed and accurate trip time and location data.

MDC units, besides providing data for grant reporting, can also provide more detailed information on how long a rider was on-board a vehicle in miles and minutes. This more detailed data can be used to define the customer share of cost on a vehicle trip, resulting in more accurate charging of costs to multiple funding agencies from the MDC generated reports.

Scheduling and Routing Software: Software is essential to allow the TMCC and federated providers to share scheduling and routing information. Currently, the two scheduling and routing software packages being used in the County by major providers are PtMS used by Sen-Han Transit and the Trapeze system used by Access Link. Since the scheduling and routing software becomes the basis for any Global Positioning System (GPS) based technology including Automatic Vehicle Locators (AVL) and Mobile Data Computers (MDC), the scheduling software must be able to accommodate these technologies, as well as allow communication of passenger trip and AVL data between operators and the TMCC.

For the TMCC to effectively build on existing technology there is a need for AVL that is scalable. That is have the capacity to link additional technologies such as MDC and rider information services that use the GPS technology; and to expand the system to include additional municipal, private and faith based providers.

5. One Stop Call Center

The One-Call Center in its initial phase would provide riders looking for passenger transportation service a call to discuss their mobility needs and receive help in determining eligibility for funding and identifying the appropriate provider(s). An accessible website offering the same information will also be provided. The One Call Center will:

- Provide a well-marketed phone number and website
- Have a One-Call office that is located near other advocate and funding agencies
- Have phone and web-based linkages to other key information and referral agencies (211, 511, Google Transit, NJ Findaride, etc)
- Have trained live operators who understand the existing network of transit and human service provider operators and are prepared to assist riders with varying needs and possible disabilities
- Have access to key provider agency eligibility, intake and trip scheduling requirements to assist the customer in reaching the appropriate provider(s)

In its initial phase, the operator of the One-Call Center will establish close working relationships with major providers including Sen-Han Transit, SJTA, the Faith Based Collaborative and Access Link as well as key municipal, faith based and private livery operators who are positioned to provide needed transportation services.

The One Call Center will build and maintain a database of information on key provider funding eligibility, hours and days of operation and geographic service area to be able to make informed decisions on whether a particular provider might be able to address a trip need identified by rider type, time and geography.

During the first phase, the purchase of an updated routing and scheduling software will enable the One-Call Center to see individual key operator vehicle runs and to discuss with the individual provider the potential for accepting a new trip from a certified rider. Actual scheduling and dispatching will still be performed by the individual providers but the ability to share vehicle run information will enable the One-Call Center to identify where provider capacity to address eligible trips exists.

6. Rider Security

One of the biggest challenges to serving riders through an integrated system of providers is:

- Providing enhanced security for riders on vehicles
- Providing enhanced security for riders at key stops

This is particularly true for serving riders with coordinated trips using a combination of human service and traditional transit providers. Following are some of the supports that contribute to a secure and confident rider trip experience:

- On vehicle cameras that will record event data
- An alert system that allows the driver to notify the dispatch of an on-board emergency
- An alert system that will connect the driver with 911 in the event of a serious emergency
- Security cameras with 24/7 monitoring located at high crime transit stops

- An alert/security system at key stop locations that allows riders to report emergencies

This project seeks to improve passenger transportation services in Camden County with minimal additional expense. Ideally, collaborative efforts may ultimately lead to either a reduction in total transportation costs or greater coverage for the investment. In general, this project has the opportunity to reduce the cost per passenger mile through increased ridership and reduced duplication of service. The proposed system elements to accomplish the project goals include making customer trip information more available to users, implementing a seamless fare/billing system for all transportation services in Camden County, developing coordination among service provider trip functions, and establishing a one stop “Call” function for services that will allow users to access all transportation services through one action.

Next Steps

The Camden County Travel Management Coordination Center project team through the input of Camden County providers, funders and riders has defined what the TMCC will do. The next step is to develop a system design that will identify how the TMCC will do this and implementation plan that will phase the project through completion.